

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF AERONAUTICS - STANDARD SPECIFICATION
P-151
Clearing and Grubbing

DESCRIPTION

1.1 This item shall consist of clearing or clearing and grubbing, including the disposal of materials, for all areas within the limits designated on the plans or as required by the Engineer.

Clearing shall consist of the cutting and removal of all trees, stumps, brush, logs, hedges, the removal of fences and other loose or projecting material from the designated areas. The grubbing of stumps and roots will not be required.

Clearing, when so designated, shall consist of the cutting and removal of isolated single trees or isolated groups of trees. The cutting of all trees of this classification shall be in accordance with the requirements for the particular area being cleared, or as shown on the plans, or as directed by the Engineer. The trees shall be considered isolated when they are 40 feet or more apart, with the exception of a small clump of approximately five trees or less.

Clearing and grubbing shall consist of clearing the surface of the ground of the designated areas of all trees, stumps, down timber, logs, snags, brush, undergrowth, hedges, heavy growth of grass or weeds, fences, structures, debris, and rubbish of any nature, natural obstructions or such material which in the opinion of the Engineer is unsuitable for the foundation of strips, pavements, or other required structures, including the grubbing of stumps, roots, matted roots, foundations, and the disposal from the project of all spoil materials resulting from clearing and grubbing by burning or otherwise.

1.2 Offsite Work. The Contractor shall not enter on any parcel of land, not owned by the airport, to start "offsite" work until he or she has

received, in writing from the Engineer, a notification that the land owner has been made aware of the expected date of commencement of the work. The Contractor shall keep his work forces informed as to any conditions or special considerations which affect such offsite work, including but not limited to, the disposition of any timber, wood, and salvaged or waste materials, of any fences, building, ornamentals, etc. which shall remain and the condition the site is to be left in at the completion of the work.

Neither the Contractor nor his subcontractors shall enter into any agreement with any land owner to change the conditions of the contract, for better or worse, without the specific written approval of the Engineer.

1.3 Environmental Considerations. The Contractor shall manage his clearing or clearing and grubbing operations in the best possible manner so as to create the least possible disturbance or pollution to the natural or man made environment. Water sources and drainage courses shall be protected against the infiltration of soil, silt, debris, ashes, fuels, chemicals or other foreign matter. Unnecessary destruction of wild life and wild life habitat will be avoided.

Burning of timber and debris shall not be authorized by the Engineer, until the Contractor has obtained a burning permit from the appropriate local authorities. All burning shall conform to the conditions of the burning permit. In addition the Contractor shall control such burning in a manner as to produce the least smoke or air pollutants and provide minimum annoyance to surrounding property owners.

CONSTRUCTION METHODS

2.1 General. The areas denoted on the plans to be cleared and grubbed under this item

shall be staked on the ground by the Engineer. The clearing and grubbing shall be done at a satisfactory distance in advance of the grading operations.

All spoil materials removed by clearing or by clearing and grubbing shall be disposed of by burning or by removal to approved disposal areas. Piles for burning shall be placed either in the cleared area near the center or in adjacent open spaces where no damage to trees, or other property will occur. The Contractor will be responsible for controlling fires in compliance with all federal and state laws and regulations relative to building fires at the site. Ashes resulting from burning shall be removed and disposed of when directed by the Engineer.

As far as practicable, waste concrete and masonry shall be placed on slopes of embankments or channels. When embankments are constructed of such material, this material shall be placed in accordance with requirements for formation of embankments. Any broken concrete or masonry which cannot be used in construction, and all other materials not considered suitable for use elsewhere, shall be disposed of by the Contractor. In no case shall any discarded materials be left in windrows or piles adjacent to or within the airport limits. The manner and location of disposal of materials shall be subject to the approval of the Engineer and shall not create an unsightly or objectionable view. When the Contractor is required to locate a disposal area outside the airport property limits at his or her own expense, he or she shall obtain and file with the Engineer, permission in writing from the property owner for the use of private property for this purpose.

If the plans or the specifications require the saving of merchantable timber, the Contractor shall trim the limbs and tops from designated trees, saw them into suitable lengths, and make the material available for removal by other agencies.

Any blasting necessary shall be the Contractor's responsibility, and the utmost care shall be taken not to endanger life or property.

The removal of existing structure and utilities required to permit orderly progress of work shall be accomplished by local agencies, unless otherwise shown on the plans. Whenever a telephone or telegraph pole, pipeline, conduit, sewer, roadway, or other utility is encountered and must be removed or relocated, the Contractor shall advise the Engineer who will notify the proper local authority or owner and attempt to secure prompt action.

2.2 Clearing The Contractor shall clear the staked or indicated area of all objectionable materials. Trees unavoidably falling outside limits must be cut up, removed, and disposed of in a satisfactory manner. In order to minimize damage to trees that are to be left standing, trees shall be felled toward the center of the area to be cleared. The Contractor shall preserve and protect from injury all trees not to be removed. The trees, stumps, and brush shall be cut to a height of not more than 12 inches above the ground. The grubbing of stumps and roots will not be required.

When isolated trees are designated for clearing, the trees shall be classed in accordance with the butt diameter size as measured at a point 18 inches above the ground level or at a designated height specified in the proposal.

Fences shall be removed and disposed of when directed by the Engineer. Fence wire shall be neatly rolled and the wire and posts stored on the airport if they are to be used again, or stored at a designated location if the fence is to remain the property of a local owner or of a civic authority.

2.3 Clearing and Grubbing In areas designated to be cleared and grubbed, all stumps, roots, buried logs, brush, grass, and other unsatisfactory materials shall be removed, except where embankments exceeding 3 ½ feet in depth are to be made outside of paved areas. In cases where such depth of embankments are to be made, all unsatisfactory materials shall be removed, but sound trees, stumps, and brush can be cut off within above the ground and allowed to remain. Tap roots and other projections over

1 ½ inches in diameter shall be grubbed out to a depth of at least 18 inches below the finished subgrade or slope elevation.

Any buildings and miscellaneous structures that are shown on the plans to be removed shall be demolished or removed, and all materials therefrom shall be disposed of either by burning or otherwise removed from the site. The remaining or existing foundations, wells, cesspools, and all like structures shall be destroyed by breaking down the materials of which the foundations, wells, cesspools, etc., are built to a depth at least 2 feet below the existing surrounding ground. Any broken concrete, blocks, or other objectionable material which cannot be used in backfill shall be removed and disposed of. The holes or openings shall be backfilled with acceptable material and properly compacted.

All holes remaining after the grubbing operation in embankment areas shall have the sides broken down to flatten out the slopes, and shall be filled with acceptable material, moistened and properly compacted in layers to the density required in Item P-152. The same construction procedure shall be applied to all holes remaining after grubbing in excavation areas where the depth of holes exceeds the depth of the proposed excavation.

METHOD OF MEASUREMENT

3.1 The quantities of clearing or clearing and grubbing as shown by the limits on the plans or as ordered by the Engineer shall be cited in terms of the number of acres or fractions thereof, of land specifically cleared or cleared and grubbed, unless lump-sum bid is specified in the proposal.

When isolated trees are designated for clearing, the quantities of trees, as determined in accordance with ranges of butt diameter size, measured at a point 18 inches above the ground level at the tree, shall be paid for according to the schedule of sizes as follows:

The number of trees--

From 0 to 2 ½ feet, butt diameter

From 2 ½ to 5 feet, butt diameter

For 5 feet or more, butt diameter

BASIS OF PAYMENT

4.1 Payment shall be made at the contract unit price per square meter or in a lump sum for clearing. This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item.

4.2 Payment shall be made at the contract unit price for clearing isolated trees. This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item.

4.3 Payment shall be made at the contract unit price per acre or in a lump sum for clearing and grubbing. This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under the nomenclature and seven digit item number specified in the plans and proposal for each type of clearing, grubbing, topping, trimming, or removal work required per square acre, per each, per station, per linear foot, per square yard, or per lump sum, as applicable.

The first three digits of any item number for work included under this specification shall be 151, i.e. 151XXXX.